

REMARKS

The Office Action dated July 13, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 15, 32, 37, and 40 have been amended to more particularly point out and distinctly claim the invention. Support for the amended recitations may be found, at least, in paragraphs [0043], [0044], and [0049] of the present application. New claim 42 has been added. No new matter has been added.

Claims 1-37 and 40-42 are currently pending in the application, of which claims 1, 15, 32, 37, and 40-42 are independent.

On page 2 of the Office Action, claim 38 was rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2003/0137948 to Komandur et al. ("Komandur"). Claim 38 was canceled in the Response filed on May 11, 2007. Accordingly, this rejection is moot, and it is respectfully requested that this rejection be withdrawn.

On page 3 of the Office Action, claims 1-3, 6, 8-11, 13-17, 20, 22-37, and 39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur ("Komandur") in view of U.S. Patent No. 6,161,016 to Yarwood ("Yarwood"). Claim 39 was canceled in the Response filed on May 11, 2007, and, thus, its rejection is moot and should be withdrawn. With respect to independent claims 1, 15, 32, and 37, it is respectfully

asserted that, for at least the reasons provided herein below, Komandur and Yarwood fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Independent claim 1, upon which claims 2-14 are dependent, recites a packet data communication system including at least one access network configured to provide a wireless interface between a mobile device and the at least one access network for communication of packet data. The system also includes a core network comprising at least one core network node configured to support communication of packet data on the wireless interface and configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device. The system includes a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device, and, if the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node.

Independent claim 15, upon which claims 16-31 are dependent, recites a method including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless interface between the access network and the mobile device. The method includes sending one or more messages from the core network of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data

communication link in the absence of a response to said one or more messages. The method detects at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device, is met. Subsequent to such detection, the method generates at the controller and sending to the core of the network one or more messages in response to said one or more messages from the core network.

Independent claim 32, upon which claims 33-36 are dependent, recites a method, including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless interface between the access network and the mobile device, and detecting at a controller provided in association with the access network that the mobile device is out of reach. The method includes notifying a core network that the mobile device is out of reach, and in response to receiving the notification, retaining said data communication link but pausing from sending further data packets from the core network to the mobile device and processing the data packets in accordance with a predefined policy.

Independent claim 37 recites a packet data communication system including establishing means for establishing a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device, and first sending means for sending one or more messages from a core network of the data communication system to the mobile device via

the access network, wherein the core network is configured to release said data communication link in the absence of a reply to said one or more messages. The system also includes detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface other than the absence of a response to said one or more messages directed to the mobile device, is met, and second sending means for sending a further message from the controller to the core network subsequent to such detection, wherein the core network postpones the release of said release link in response to such a further message.

Independent claim 40 recites a packet data communication system, including an establishing unit configured to establish a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device. The system includes a first sending unit configured to send one or messages from a core network of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data communication link in the absence of a reply to said one or more messages. The system includes a detector configured to detect at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device, is met. The system also includes a second sending unit configured to send a further message from the controller to the core

network subsequent to such detection, wherein the core network postpones the release of said release link in response to such a further message.

Independent claim 41 recites an apparatus, which is associated with at least one access network via which a data communication link is established between a mobile device and a core network configured to release said data communication link in the absence of a response to one or more messages directed to the mobile device. The apparatus is configured to monitor at least one condition associated with the wireless interface other than the absence to said one or more messages directed to the mobile device, and, if the monitoring indicates that the at least one condition is met, either generate on behalf of the mobile device and send to the core network one or more messages in response to said one or more messages from the core network or otherwise send a message to the core network in response to which the core network postpones release of said data communication link.

Independent claim 42 recites a method for use in a system in which a data communication link is established between a mobile device and a core network configured to release said data communication link in the absence of a response to one or more messages directed to the mobile device. The method includes monitoring at least one condition associated with the wireless interface other than the absence of a response to said one or more messages directed to the mobile device, and, if the monitoring indicates that the at least one condition is met, either generating on behalf of the mobile device and sending to the core network one or more messages in response to said one or

more messages from the core network or otherwise sending a message to the core network in response to which the core network postpones release of said data communication link.

As will be discussed below, Komandur and Yarwood fail to disclose or suggest the elements of any of the presently pending claims.

Komandur generally describes transmitting packet data over a wireless network to a mobile station. The wireless network 120 transmits the packet data over the wireless air interface to the mobile station 125. See paragraph [0032]. If the mobile station becomes unreachable, the wireless content switch 115 stores the data packet in memory 155, prior to transmission to the mobile station 125. See paragraph [0045]. The wireless content switch 115 delays retransmission of the data packets until the reachability of the mobile station is determined. Once the mobile station is reachable, then a determination is made as to whether the retransmission timeout has occurred. If a retransmission timeout has occurred, then the “drain the packet” function is implemented.

Yarwood generally describes a cellular radio system in which, if no mobiles respond to a page repetition from a base station then it may be assumed that there are no longer any mobiles in the cell and the channel may be released. See column 7, lines 40-52. However, because of the possibility that a mobile is still in the cell but has missed a paging attempt, the channel is only released after a number of successive paging attempts fail to get a response. When the broadcast facility is no longer required, then the

broadcast center releases the call which stops further pages and releases the resources at abase stations and mobiles.

The Office Action contends that Komandur discloses all of the features of the claims except “a core network ... configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device,” as recited in independent claim 1 and similarly recited in independent claims 15, 37, and 40-42. The Office Action cited Yarwood to remedy this deficiency of Komandur.

However, Applicant respectfully notes that in the Office Action dated January 11, 2007, the Office Action had also recognized that Komandur fails to teach or suggest, “if the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node,” as recited in independent claim 1 and similarly recited in independent claims 15, 37, and 40-42. Also, the Office Action of January 11th had also recognized that Komandur fails to teach or suggest, “*notifying* a core network that the mobile device is out of reach; and *in response to receiving the notification*, retaining said data communication link but pausing from sending further data packets from the core network to the mobile device and processing the data packets in accordance with a predefined policy,” as recited in independent claim 32. The cited paragraph [0045] of Komandur does not mention sending any message to the wired network (110 in Figure 1) or the content source (105 in Figure 1) when the mobile station becomes

unreachable. Furthermore, the present Office Action does not submit any showing how Yarwood would remedy these further deficiencies of Komandur.

It is respectfully asserted that the reason such showing was made is because, similarly to Komandur, Yarwood is devoid of any teaching or suggestion of such claimed features. Column 7, lines 41 to 52 of Yarwood does not teach or suggest sending any message from the base station to the broadcast centre when a paging attempt fails to get a response; in particular, it does not mention (i) sending from the broadcast station to the mobile device one or more messages to which the absence of a response would result in the broadcast centre releasing a communication link with the mobile device, and generating at the base station a message in response to said one or more messages from the broadcast centre; or (ii) the broadcast centre retaining a communication link with the mobile device despite receiving a notification that said mobile device is out of reach. Rather, Yarwood focuses on allocating a single channel to the broadcast service, irrespective of the number of mobile units in the cell, and not allocating a channel to a cell when there is no respond to a paging signal in that cell. Yarwood does not provide any description or suggestion of a generation or sending to the core network node of one or more messages in response to one or more of said one or more messages from the core network node as recited in the present claims. Also, Yarwood does not teach or suggest the notification and the functions performed in response to the notification as recited in independent claim 32.

Furthermore, a combination of Komandur and Yarwood would fail to teach or suggest, “a controller ... configured to monitor at least one condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device,” as recited in independent claim 1 and similarly recited in independent claims 15, 37, and 40-42. Komandur is silent as to providing any description regarding the monitoring performed in the present application. Yarwood, in turn, deals with the problem of a mobile device sometimes being in a physical location where it is unable to respond to a communication by only releasing the channel associated with the communication after a number of successive paging attempts. In contrast, the present application describes a different technique, which includes monitoring a condition associated with the wireless interface in order to get an indication of whether the mobile device is actually in such a physical location, or whether the absence of a response to the communication/message associated with the link is intentional.

Accordingly, the combination of Komandur and Yarwood would not disclose or suggest all of the elements of any of the presently pending claims.

In view of the foregoing, it is respectfully requested that independent claims 1, 15, 32, 37, and 40-42 and related dependent claims be allowed. Withdrawal of the rejection is respectfully requested.

On page 10 of the Office Action, claims 4, 5, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur, Yarwood, and further in view of U.S. Patent No. 7,154,903 of Sivalingham ("Sivalingham"). It is respectfully asserted that, for at least the reasons provided herein below, Komandur, Yarwood, and Sivalingham fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Furthermore, claims 4, 5, 18, and 19 depend respectively from, and further limit, independent claims 1 and 15.

The description and arguments presented above supporting the patentability of independent claims 1 and 15 over Komandur and Yarwood are incorporated herein. Sivalingham generally describes a system and a method of buffering packet data associated with dormant mobile terminals at a packet control function (PCF) in a wireless communication network. The PCF uses a reactivation timer to limit the amount of memory used for buffering data, and to reduce network signaling overhead associated with attempted reactivation of a dormant mobile terminal. A reactivation cycle begins when the PCF receives incoming data for a dormant mobile terminal. The PCF starts a reactivation timer, begins buffering the incoming data, and initiates connection reestablishment with the dormant mobile terminal. If the connection is reestablished before expiration of the timer, the PCF transfers the buffered data to the terminal; otherwise, the data is discarded. Also, any data received during the cycle in excess of a defined buffer limit is discarded.

However, Sivalingham does not cure the deficiencies in Komandur and Yarwood, as Sivalingham also does not disclose “a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device, and, if the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node,” as recited in independent claim 1 and similarly recited in independent claim 15. Thus, the combination of Komandur, Yarwood, and Sivalingham does not disclose or suggest all of the elements of independent claims 1 and 15. Additionally, claims 4-5 and 18-19 should be allowed for at least their dependence upon independent claims 1 and 15, and for the specific limitations recited therein. It is respectfully requested that the rejection be withdrawn.

On page 11 of the Office Action, claims 7 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur, Yarwood, and further in view of U.S. Publication No. 2002/0057658 A1 of Lim (“Lim”). It is respectfully asserted that, for at least the reasons provided herein below, Komandur, Yarwood, and Lim fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Furthermore, claims 7 and 21 depend respectively from, and further limit, independent claims 1 and 15.

The description and arguments presented above supporting the patentability of independent claims 1 and 15 over Komandur and Yarwood are incorporated herein. Lim generally describes a method for serving a packet dormant handoff is disclosed, including determining with a mobile switching center whether a mobile station performs a dormant handoff into an area of a destination base station controller/packet controller function (BSC/PCF) and providing information of the dormant handoff from the mobile switching center to an original BSC/PCF, when the mobile station performs the dormant handoff.

However, Lim does not cure the deficiencies in Komandur and Yarwood, as Lim also does not disclose “a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface other than the absence of said response to said one or more messages directed to the mobile device, and, if the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node,” as recited in independent claim 1 and similarly recited in independent claim 15. Thus, the combination of Komandur, Yarwood, and Lim does not disclose or suggest all of the elements of independent claims 1 and 15. Additionally, claims 7 and 21 should be allowed for at least their dependence upon independent claims 1 and 15, and for the specific limitations recited therein. It is respectfully requested that the rejection be withdrawn.

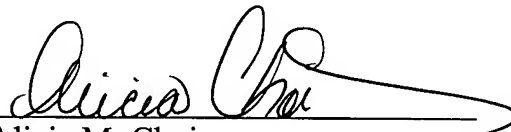
For the reasons explained above, it is respectfully submitted that each of claims 1-37 and 40-42 recite subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-37 and 40-42 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Additional Claim Fee Transmittal
Check No. 17229